

**Remarks**

Reconsideration of the application in light of the amendments and the following remarks is respectfully requested.

**Claim of Priority**

The Examiner acknowledges the priority claim made in the present application to FI 20011400, filed June 29, 2001; FI 20012525, filed June 20, 2001; and PCT/FI02/00565, filed June 26, 2002. (Detailed Action, items 1-3, page 2.) However, the Examiner notes that certified copies of the priority applications have not been filed.

Applicants submit that certified copies of FI 20011400 and FI 20012525 were filed on January 26, 2004. **Attachment A** includes: (1) photocopies of a Patent Application Transmittal dated January 26, 2004, which indicates in box 15 that certified copies of the priority documents are accompanying the transmittal; (2) the front pages of both FI 20011400 and FI 20012525; (3) an Express Mail Certificate signed and dated January 26, 2004; and (4) a return postcard stamped by OIPE acknowledging receipt of these materials on January 26, 2004. These documents prove Applicants' filing of the certified copies for the Finnish priority documents.

With respect to PCT/FI02/00565, this international application was filed in the English language and designates the U.S. as a contracting state. Title 35 U.S.C. § 363 provides that "[a]n international application designating the United States shall have the effect, from its international filing date under article 11 of a treaty, of a national application for patent regularly filed in the Patent and Trademark Office . . . ." A priority claim to a national application does not require a certified copy, thus a certified copy of PCT/FI02/00565 is not required. Accordingly, Applicants request that the Examiner acknowledge receipt of the certified copies of the priority documents on the Summary Page of the next Office Communication.

The Examiner also notes that a claim for priority cannot be based on FI 20011400, FI 20012525, and PCT/FI02/00565 because the present application was filed more than twelve months



Claim 1 has been amended to better set forth that periodic moving of the planar antenna occurs in at least in portions of the planar antenna beyond the location of the piezoelectric element. Amendments to claims 2-3 and 5-10 are being made to place the claims in better idiomatic English. Amendments to claims 1-3 and 5-10 are not being made for reasons related to patentability. Support for this amendment can be found in the Specification, at page 3 line 25 through page 4, line 10 and Fig. 2b. Added claim 11 recites similar subject matter with respect to the periodic movement of at least portions of the planar element.

### **Rejections Under 35 U.S.C. § 102**

Claims 1, 2 and 10 as being anticipated by U.S. Patent No. 6,198,206 to Saarma et al. ("Saarma"). Applicant respectfully traverses the rejection.

The Examiner contends that Saarma discloses an embodiment where a piezo-electric element is bonded "to one or more electroded sheets or to a patterned metal shim or the like." (Detailed Action, page 4.) The Examiner also contends that it is inherent for cellular telephones to have an audio amplifier incorporated within its structure.

Applicant submits that Saarma discloses a piezo-electric unit attached to the shell or housing of a device. Examples of such shells or housings are cases of paging units, cellular telephone or laptop computer cases, computer mice, etc. It is the shell or housing that is vibrated by the piezo-electric unit. Saarma does not disclose, nor suggest, an integrated radio telephone with "a piezoelectric element attached to [a] planar element" of an antenna, as recited in claim 1.

Further, Saarma does not disclose, nor suggest, the use of antenna parts as a speaker or a microphone. A person of ordinary skill in the art would know that a speaker or microphone are formed from the same structure, which is incorporated into electronic circuitry differently. The Specification, page 3, lines 15-24 and page 4, lines 11-14, describe how the periodic movement can be caused by an audio signal (speaker function) or by sound waves (microphone function). Additionally, there is no suggestion in Saarma to attach the piezo-electric unit to a planar antenna in a cellular telephone.

For the reasons demonstrated above, Saarma does not disclose each and every element of claim 1. Claims 2 and 10 depend from claim 1, and recite features in addition to the features of claim 1. Therefore, Saarma does not anticipate claims 1, 2 and 10. Reconsideration and withdrawal of the rejection is requested.

### **Rejections Under 35 U.S.C. § 103**

Claims 3-8 stand rejected as being unpatentable over Saarma in view of U.S. Patent No. 5,410,749 to Siwiak et al. ("Siwiak"). Applicant traverses the rejection.

The Examiner contends that Saarma discloses most of the features of claims 3-8. The Examiner acknowledges that Saarma does not disclose that the radiating surface has a first and second branch. The Examiner relies on Siwiak as disclosing this feature, which the Examiner admits is missing from Saarma.

First, Applicant respectfully submits that the Examiner is incorrectly reading Siwiak as disclosing first and second branches to produce two bands. It is unclear from the Detailed Action, item 12, page 6, whether the Examiner is citing the conductive shorting element 306 which forms an aperture, or the first surface of the planar element and the second surface of the ground plane, as pending on the claimed invention. If the former, a conductive element forming an aperture is not first and second branches. If the latter, Siwiak Fig. 1 clearly depicts a microstrip antenna 300 formed with a dielectric layer 304 sandwiched between a ground plane 314 and a planar antenna element 302. The planar antenna element is the only radiating plane disclosed in Siwiak. A person of ordinary skill in the art would know that the ground plane 314 is not a radiating plane. Thus, Siwiak does not disclose "a first branch and a second branch to produce two bands, said planar element being the first branch of the radiating plane," as recited in claims 3 and 8.

Second, the Examiner contends that "a feeder made of conductive materials, read[s] on the claimed 'piezoelectric material.'" (Detailed Action, page 7.) Siwiak's first and second feeders 308, 310 "are present to electrically couple signals intercepted by the planar antenna element 302 with the primary receiver element circuits 328,326." (Siwiak, column 3, lines 55-63.) A person of

ordinary skill in the art would know that the first and second feeders generate two orthogonally polarized waves by means of the one planar antenna element. The source of these orthogonally polarized waves would be at the same frequency. Thus, Siwiak does not disclose, nor suggest, “a first branch and a second branch to produce two bands,” as recited in claims 3 and 8. Claim 4 depends from claim 3. Therefore, the combination of Saarma and Siwiak does not result in the invention of claims 3, 4 and 8.

Further, the combination of Saarma and Siwiak does not result in an operational device. As demonstrated above, Saarma does not disclose, nor suggest, a piezoelectric element attached to a planar element of an antenna. Siwiak discloses a microstrip antenna, which is a rigid structure formed by sandwiching a dielectric layer between a ground plane and a radiating plane. A microstrip antenna is too rigid a structure to have “periodic movement.” In contrast, claims 3-8 include the features of “a piezoelectric element attached to said planar element” and “periodic movement of said planar element,” as recited in their base claim. Thus, the combination of Saarma and Siwiak neither discloses nor suggests the claimed invention. Therefore, the Examiner has failed to meet the burden of establishing a *prima facie* case of obviousness over claims 3-8. Reconsideration and withdrawal of this rejection is requested.

Claim 9 has been rejected as unpatentable over Saarma in view of U.S. Patent No. 6,927,732 to Mähringer. Applicant respectfully traverses the rejection.

The Examiner relies on Mähringer as disclosing “a communication terminal provided with an electromagnetic transmission or receiving antenna, an acoustic converter, preferably housed in a mobile telephone, reading on the claimed ‘integrated radio telephone.’” (Detailed Action, item 13, page 12).

Claim 9 depends from claim 1, and recites its own features in addition to the features set forth in its base claim. As is demonstrated above, Applicant submits that the combination of Saarma and Mähringer does not disclose, nor suggest, those elements of claim 9 which are missing from Saarma as discussed above with respect to claim 1. Thus, the Examiner has failed to meet the

burden of establishing a *prima facie* case of obviousness over claim 9. Reconsideration and withdrawal of this rejection is requested.

### **CONCLUSION**

Each and every point raised in the Office Action dated September 26, 2005, has been addressed on the basis of the above amendments and remarks. In view of the foregoing it is believed that claims 1-11 are in condition for allowance. It is respectfully requested that the application be reconsidered, that the pending claims be allowed, and the case passed to issue.

If there are any other issues remaining which the Examiner believes could be resolved through a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

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Respectfully submitted,

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